IN THE CLAIMS

1. (Currently amended) A method for use in configuring a device coupled to a communications network, the communications network comprising a local network and one or more additional networks coupled to the local network, the method comprising the steps of:

automatically determining a link type associated with a communication link between a first device and at least one additional device coupled to the communications network, the communication link being external to the local network and comprising a communication link of the one or more additional networks, by transmitting one or more messages from the first device and examining a corresponding response received by the first device over the communication link; and

configuring at least one of the first and additional devices in accordance with the determined link type;

wherein the first device comprises a gateway coupled between the local network and the one or more additional networks; and

wherein the step of automatically determining a link type is implemented at least in part within the gateway.

2. (Original) The method of claim 1 wherein the first device comprises customer premises equipment.

3. (Original) The method of claim 1 wherein the first device comprises a network server.

4. (Original) The method of claim 1 wherein the determined link type is one of a plurality of link variants associated with the communications network.

5. (Original) The method of claim 2 wherein the customer premises equipment is coupled to the communication network via a digital subscriber line.

6. (Original) The method of claim 2 wherein the customer premises equipment comprises an ADSL (asymmetric digital subscriber line) termination unit-receive (ATU-R) device.

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7. (Original) The method of claim 1 wherein the communication network comprises an Internet protocol (IP) network.

8. (Original) The method of claim 1 wherein the determined link type comprises one of a plurality of link variants at least a subset of which correspond to encapsulation of different types of protocols in Asynchronous Transfer Mode (ATM) cells.

9. (Original) The method of claim 1 wherein the communication link comprises an ATM virtual circuit (VC).

10. (Original) The method of claim 1 wherein the determined link type comprises one of a plurality of link variants including one or more of a logical link control (LLC), a point-to-point protocol (PPP), an LLC-PPP, an Internet protocol (IP), an LLC-IP protocol, an Ethernet protocol, and an LLC-Ethernet protocol.

11. (Currently amended) ~~The method of claim 1~~ A method for use in configuring a device coupled to a communications network, the method comprising the steps of:

automatically determining a link type associated with a communication link between a first device and at least one additional device coupled to the communications network by transmitting one or more messages from the first device and examining a corresponding response received by the first device over the communication link; and

configuring at least one of the first and additional devices in accordance with the determined link type;

wherein the determining step includes first testing to determine if the link is an LLC-type link, performing at least one additional test of a first type if the link is not an LLC-type link, and performing at least one additional test of a second type if the link is an LLC-type link.

12. (Original) The method of claim 11 wherein the at least one additional test of the first type includes a test to determine if the link is a PPP link.

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13. (Original) The method of claim 11 wherein the at least one additional test of the second type includes a test to determine a particular type of encapsulation for the LLC-type link.

14. (Currently amended) An apparatus for use in configuring a first device coupled to a communications network, the communications network comprising a local network and one or more additional networks coupled to the local network, the apparatus comprising:

a processing element operative to automatically determine a link type associated with a communication link between the first device and at least one additional device coupled to the communications network, the communication link being external to the local network and comprising a communication link of the one or more additional networks, by transmitting one or more messages from the first device and examining a corresponding response received by the first device over the communication link; and to direct the configuration of at least one of the first and additional devices in accordance with the determined link type;

wherein the first device comprises a gateway coupled between the local network and the one or more additional networks; and

wherein the processing element operative to automatically determine a link type is implemented at least in part within the gateway.

15. (Original) The apparatus of claim 14 wherein the first device comprises customer premises equipment.

16. (Original) The apparatus of claim 14 wherein the first device comprises a network server.

17. (Original) The apparatus of claim 14 wherein the determined link type is one of a plurality of link variants associated with the communications network.

18. (Original) The apparatus of claim 15 wherein the customer premises equipment is coupled to the communication network via a digital subscriber line.

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19. (Original) The apparatus of claim 15 wherein the customer premises equipment comprises an ADSL (asymmetric digital subscriber line) termination unit-receive (ATU-R) device.

20. (Original) The apparatus of claim 14 wherein the communication network comprises an Internet protocol (IP) network.

21. (Original) The apparatus of claim 14 wherein the determined link type comprises one of a plurality of link variants at least a subset of which correspond to encapsulation of different types of protocols in Asynchronous Transfer Mode (ATM) cells.

22. (Original) The apparatus of claim 14 wherein the communication link comprises an ATM virtual circuit (VC).

23. (Original) The apparatus of claim 14 wherein the determined link type comprises one of a plurality of link variants including one or more of a logical link control (LLC), a point-to-point protocol (PPP), an LLC-PPP, an Internet protocol (IP), an LLC-IP protocol, an Ethernet protocol, and an LLC-Ethernet protocol.

24. (Currently amended) ~~The apparatus of claim 14~~ An apparatus for use in configuring a first device coupled to a communications network, the apparatus comprising:

a processing element operative to automatically determine a link type associated with a communication link between the first device and at least one additional device coupled to the communications network, by transmitting one or more messages from the first device and examining a corresponding response received by the first device over the communication link; and to direct the configuration of at least one of the first and additional devices in accordance with the determined link type;

wherein the processing element is operative to perform a test to determine if the link is an LLC-type link, to perform at least one additional test of a first type if the link is not an LLC-

type link, and to perform at least one additional test of a second type if the link is an LLC-type link.

25. (Original) The apparatus of claim 24 wherein the at least one additional test of the first type includes a test to determine if the link is a PPP link.

26. (Original) The apparatus of claim 24 wherein the at least one additional test of the second type includes a test to determine a particular type of encapsulation for the LLC-type link.

27. (Currently amended) A machine-readable medium storing one or more programs for use in configuring a device coupled to a communications network, the communications network comprising a local network and one or more additional networks coupled to the local network, which wherein the one or more programs when executed by a processor implement the steps of:

automatically determining a link type associated with a communication link between a first device coupled to the communications network and at least one additional device coupled to the communications network, the communication link being external to the local network and comprising a communication link of the one or more additional networks, by transmitting one or more messages from the first device and examining a corresponding response received by the first device over the communication link; and

configuring at least one of the first and additional devices in accordance with the determined link type;

wherein the first device comprises a gateway coupled between the local network and the one or more additional networks; and

wherein the step of automatically determining a link type is implemented at least in part within the gateway.